

REMARKS

By this Amendment, the pending claims are amended to broaden their scope and in response to withdrawal of an indication of allowable subject matter, claims 8, 16-25, 40, 46-52 and 57-102 are cancelled without prejudice or disclaimer, and new claims 103-112 are added to more fully claim the disclosed invention and are patentable over the cited prior because they recite either a patentable transmitter wherein a space-time block coded signal is transmitted by one base station so that a part of the space-time block coded signal is transmitted through each transmit antenna path or a patentable transmitter wherein a signal is transmitted by at least two base stations, and the signal is weighted with weighting coefficients formed on the basis of differential information signaled by the receiver and indicating how the ratios of the weighting coefficients for the transmit antenna paths are changed differentially. Claims 1-7, 9-15, 26-39, 41-45, 53-56 and 103-112 are pending.

The objection to claim 100 is moot in view of its cancellation.

Claims 3-7, 9-12, 16-31, 35-39, 41-42, 46-56, 71-77 and 85-100 were rejected under 35 U.S.C. 102(e) as being anticipated by Harrison (U.S. 6,154,485), claims 32, 57-70, 79-80 and 101-102 were rejected under 35 U.S.C. 102(e) as being anticipated by Greenstin et al. (U.S. 6,131,016; hereafter "Greenstin"), claims 8, 40, and 78 were rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison and Yun (U.S. 6,463,295), and claims 13-15, 43-45 and 81-83 were rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison.

The cancellation of claims 8, 16-25, 40, 46-52 and 57-102 renders their rejection moot. Applicants traverse the rejections of the remaining claims because, the cited prior art references, analyzed individually or in combination, fail to disclose, teach or suggest all the features recited in the rejected claims. For example, the cited prior art fails to disclose, teach or suggest the claimed invention relating to the use of a space-time block code or the use of differential information in weighting coefficient data signaling from a receiver.

Harrison merely teaches the use of orthogonal transmit diversity (OTD) (see, col. 1, lines 45-57), wherein a serial traffic channel is converted into two or more parallel traffic channels. If weighting of signal fails, half of the bits (the bits in one of the parallel traffic channels) are lost. To the contrary, in accordance with the claimed invention, the space-time block code divides the signal between the transmit antenna paths so that even if the weighting of the signal is not optimal, the signal may still be received, as all transmitted information is present in both paths, due to the properties of the space-time block code. Nevertheless, Harrison fails to teach or suggest the claimed use of a space-time block code.

Furthermore, Harrison fails to teach or suggest the use of differential information in weighting coefficient data signaling from a receiver. Rather, in Harrison, adaptive array weights are computed according to messages received from the receiver and including information on the characteristics of (parallel traffic) channels (col. 4, lines 28-38, col. 6 lines 1-6).

Greenstein fails to remedy these deficiencies of Harrison because Greenstein teaches use of Orthogonal Frequency Division Multiplexing (OFDM), which is fundamentally different than space-time block codes. As a result, Greenstein fails to disclose, teach or suggest the use of differential information in weighting coefficient data signaling from a receiver. Rather, Greenstein merely discloses three kinds of signaling (see, col. 4, line 53 – col. 5, line 37): selection diversity signaling, which indicates which of the two transmit antennae is detected best, relative phase information signaling for co-phasing downlink tones, and relative amplitude and relative phase signaling for maximal ratio combining. Therefore, the combined teaching of Harrison and Greenstein fails to teach or suggest fails to disclose, teach or suggest the claimed invention relating to the use of a space-time block code or the use of differential information in weighting coefficient data signaling from a receiver.

Furthermore, Yun also fails to remedy these deficiencies of Harrison and Greenstein because Yun merely teaches power control of signals between the base stations and mobile stations; thus, Yun's teachings have nothing to do with the claimed use of a space-time block code or the use of differential information in weighting coefficient data signaling from a receiver.

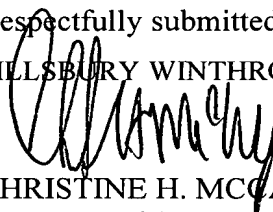
Accordingly, the cited prior art references fail to disclose, teach or suggest all the features recited in the pending claims. Therefore, Applicants request issuance of a notice of allowance indicating the allowability of the pending claims. However, if anything further is necessary to place the application in condition for allowance, Applicants request that the Examiner telephone their undersigned representative.

HOTTINEN ET AL. -- 09/879,831
Client/Matter: 060258-0280346

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



CHRISTINE H. MCCARTHY

Reg. No. 41844

Tel. No. 703 770.7743

Fax No. 703 770.7901

Date: April 14, 2006
P.O. Box 10500
McLean, VA 22102
(703) 770-7900